

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1-5 (Canceled)

6. (Original) A method for manufacturing a photomask in which a light transmitting pattern portion and a light shielding pattern portion are arranged for forming a predetermined optical image pattern on the surface of a substrate, comprising:

calculating a pattern area ratio, which is a ratio of the area of the light transmitting pattern portion or the light shielding pattern portion to the area of the photomask, from the design data of a given layout pattern of the photomask, and a pattern density, which is a ratio of the area of the light transmitting pattern portion or the light shielding pattern portion within said region to the area of the region extracted from the given layout pattern;

estimating the XY difference of the formed pattern from the calculated pattern area ratio and the pattern density, covering the case where a pattern is formed on the photomask by using the design data of the imparted layout pattern; and

imparting a correction amount to said imparted layout pattern based on the estimated XY difference.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

7. (Original) A photomask formed on the basis of the layout pattern of the photomask corrected by employing the method of manufacturing a photomask defined in claim 1.

8. (Original) A method of manufacturing a semiconductor device, comprising forming a predetermined optical image pattern on the surface of a substrate by using the photomask defined in claim 7.

9. (Original) A photomask prepared on the basis of the layout pattern of the photomask corrected by employing the method of manufacturing a photomask defined in claim 5.

10. (Original) A method of manufacturing a semiconductor device, comprising forming a predetermined optical image pattern on the surface of a substrate by using the photomask defined in claim 9.

11. (Original) A photomask formed on the basis of the layout pattern of the photomask corrected by employing the method of manufacturing a photomask defined in claim 6.

12. (Original) A method of manufacturing a semiconductor device, comprising forming a predetermined optical image pattern on the surface of a substrate by using the photomask defined in claim 11.